Method of Manufacture of Silicon Based Package and Devices Manufactured Thereby

ABSTRACT

A Silicon Based Package (SBP) is formed starting with a thick wafer, which serves as the base for the SBP, composed of silicon which has a first surface and a reverse surface which are planar. Then form an interconnection structure including metal capture structures in contact with the first surface and multilayer conductor patterns over the first surface. Form a temporary bond between the SBP and a wafer holder, with the wafer holder being a rigid structure. Thin the reverse side of the wafer to a desired thickness to form an Ultra Thin Silicon Wafer (UTSW) for the SBP. Form via holes with tapered or vertical sidewalls, which extend through the UTSW to reach the metal capture structures. Then form metal pads in the via holes which extend through the UTSW, making electrical contact to the metal capture structures. Then bond the metal pads in the via holes to pads of a carrier.

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